

REMARKS

In an Office Action dated April 8, 2005, claims 1-11, 13-20 and 22, all of the claims then under consideration in the above-identified application, were rejected. In response to the Office Action, Applicants are amending independent claim 1.

In view of the amendments and the following remarks, Applicants respectfully request reconsideration of this application, and allowance of all of the presently pending claims, as amended.

Claims 1-6, 10, 15, 16, and 18-20 were rejected under 35 USC §103(a) as being unpatentable over Abdul-Malak U.S. Patent No. 5,567,806 in view of Stone et al. U.S. Patent No. 5,624,463 (Stone). Insofar as this rejection could apply to the claims, as amended, it is respectfully traversed.

All of the claims of the present application specifically recite a multi-layer sheet of collagen membrane material including a smooth-faced barrier layer consisting essentially of collagen I, collagen III or mixtures thereof oriented away from a damaged area, and a matrix layer having a matrix structure consisting essentially of collagen II oriented toward a damaged area.

Abdul-Malak discloses only a Type I or III collagen membrane.

The Office Action at page 7, last paragraph, states that Stone “provides the use of collagen II as the inner material and placing a barrier material with a fibrous face toward the inner material, col. 12, lines 54-56.”

However, Stone never teaches or even remotely suggests orienting a matrix layer having a matrix structure consisting essentially of collagen II toward a damaged area.

In fact, whenever Stone utilizes collagen II as an “inner material”, the collagen II must be combined with hydroxyapatite or tricalcium phosphate (TCP), *See, e.g.*, column 9, lines 32-34, or Example 4 containing the language quoted in the Office

Action.

Clearly, the “inner material” of Stone cannot be a matrix structure consisting essentially of collagen II, since the “inner material” is a “conical, rigid base component 20 which extends downward from the underside of matrix 12” (column 5, lines 48-49). From the Stone teaching it is clear that when the “rigid base component 20” contains collagen II, the component must consist essentially of collagen II and TCP or hydroxyapatite, so that the base component can be “compressed” into a “rigid base component 20” (column 13, line 7-9).

It is not possible to combine Abdul-Malak and Stone to teach or suggest the presently claimed invention.

Nothing in the combined references suggests orienting a matrix layer with a matrix structure “consisting essentially of collagen II” toward a damaged area, in combination with the other elements of the present claims.

In addition, all of the arguments made in the amendment filed January 10, 2005 are equally applicable here, and are incorporated herein by reference.

Since the Stone reference cannot be combined with Abdul-Malak to suggest the elements of the present claims, the rejection based on Abdul-Malak and Stone must be withdrawn.

Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abdul-Malak in view of Stone et al. and further in view of Geistlich et al. WO 95/18638. Claims 8 and 9 were rejected under 35 USC §103(a) as being unpatentable over Abdul-Malak in view of Stone et al. and further in view of Sonis WO 90/13302. Claim 11 was rejected under 35 USC §103(a) as being unpatentable over Abdul-Malak in view of Stone et al. and further in view of Caplan et al. U.S. Patent No. 5,197,985. Claims 13 and 14 were rejected under 35 USC §103(a) as being unpatentable over Abdul-Malak in view of Stone et al. and further in view of Geistlich et al. U.S. Patent


Application Serial No. 09/925,728
Office Action mailed April 8, 2005

No. 5,573,771. Claim 17 was rejected under 35 USC §103(a) as being unpatentable over Abdul-Malak in view of Stone et al. and further in view of Seid US Patent No. 5,254,133. Insofar as these rejections could apply to the claims, as amended, they are respectfully traversed.

The above discussion concerning the deficiencies of the Abdul-Malak/Stone combination is equally applicable here and incorporated herein by reference. None of the Geistlich et al. '638, Sonis, Caplan et al., Geistlich et al. '771, or Seid references supply the above-noted deficiencies of the Abdul-Malak/ Stone combination. In view thereof, withdrawal of the rejections based on Abdul-Malak in view of Stone, and Geistlich et al. '638, Sonis, Caplan et al., Geistlich et al. '771, or Seid is respectfully requested.

Applicants submit that the present application is now in condition for allowance. Reconsideration and favorable action are earnestly requested.

Respectfully submitted,

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